Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Geometry, Ch 5 Study Guide

Show your work. You may want to draw a picture for each situation.

1. Suppose segment DE is the midsegment of triangle ABC. If segment BC is 20, find segment DE.

2. Place the figure in a coordinate plane AND assign coordinates to each vertex: Square with length a and width a.

3. Suppose BD is a perpendicular bisector of triangle ABC. CD=2x+1 and AD=5x. Find the length of each side (not the base).

4. Suppose angle ABC is bisected by segment BD. If angle ABD=2x and angle CBD=x+14, find the value of x.

5. Determine whether the given measures can be the lengths of the sides of a triangle. Show your work!

a. 1, 12, 10

b. 2, 9, 12

6. Find the range for the measure of the third side of a triangle given the measures of the two sides. 3 and 12.

7. Suppose you have ∆ABC where AB=3, BC=2, and AC=4. (Hint: Draw the triangle!)

a) Which is the largest angle?

b) Which is the smallest angle?

For 8-9, state the assumption you would make to start a proof by contradiction.

8. RT=TS

9. If n is a multiple of 6, then n is a multiple of 3.

10. Write a proof by contradiction. Given: m2+m3=180

Prove: a ׀׀ b (a is parallel to b)

1 *a*

2

3 *b*